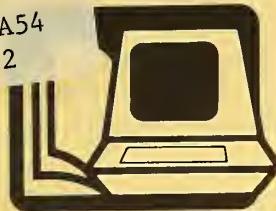


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# AGRICULTURAL LIBRARIES INFORMATION NOTES

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## THE USE OF MINI AND MICROCOMPUTERS AT THE NATIONAL AGRICULTURAL LIBRARY

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The National Agricultural Library (NAL) has been using minicomputers for the last 10 years. Although NAL has used them principally for data entry, the use of mini- and microcomputers is spreading to financial management, circulation control, and word processing. Most of the records entered into AGRICOLA, the AGRICultural OnLine Access database produced by NAL, are entered from terminals connected to a Four-Phase minicomputer located in the NAL building. A second minicomputer is used to maintain an online catalog and circulation control system. NAL has also purchased several microcomputers for word processing, financial analysis, software development, and other miscellaneous applications. Further plans for the use of mini- and microcomputers include information search and retrieval, telecommunications, and networking.

NAL began providing automated services in the late 1960s with the Pesticides Documentation Center. This early database on pesticides literature used contractor-developed software to produce camera copy for a printed index and a monthly distribution tape. The software, thus developed, formed the basis of the Cataloging and Indexing (CAIN) system that NAL adopted in 1969.

The database, now called AGRICOLA, has expanded to include several files that are created and updated by organizations outside of NAL. These are the Food and Nutrition Information Center, the Agricultural Economics Documentation Center, and the 4-H and Extension programs.

### Data Entry

In 1973, NAL installed its first minicomputer, a Sanders Model 810. The Sanders minicomputer, which consisted of a CPU (Central Processing Unit), two 5 million byte disk drives, and four data entry terminals, replaced keypunch machines as the data entry equipment for the CAIN system. Data could be entered in both lower and uppercase, and the operator need only enter the call number of the journals from which articles were being indexed. The minicomputer would retrieve the journal title abbreviation from a direct access file and add it to the record being created. The software provided with the Sanders system consisted of an operating system, which was little more than a glorified disk controller for transferring data entered from the screens onto the disk storage devices. There was also a programming language for formatting the data entry screens. The low level of this language made the development and modification of data entry screens tedious and error-prone.

The Indexing Section of NAL was the primary user of the Sanders minicomputer. Their mission was, and still is, to enter

bibliographic citations describing journal articles, conference papers, and other specialized materials into the AGRICOLA database, or as it was then called, the CAIN database. (The Indexing Section inputs from 120,000 to 130,000 records per year).

By 1977, the accumulation of new data entry requirements led NAL to rewrite the functional specifications for the data entry system. It was at this time that the design work started for the replacement of the CAIN system with AGRICOLA. Since the Sanders minicomputer could not meet all the requirements that went with the AGRICOLA database, it was the logical time to replace the data entry system.

A Four-Phase, Model IV-90, was selected as the replacement minicomputer. The configuration for the Four-Phase included, in addition to the CPU, two 60 million byte disk drives, one tape drive, and 20 terminals. The software that came with the minicomputer consisted of an interactive disk operating system (IDOS) and a data entry software system call VISION. The VISION software included a high level programming language for formatting the data entry screens. Although this language is not really "procedure oriented," it did make it possible for the in-house programming staff to modify the data entry screens quickly and easily. Another advantage of the Four-Phase system is that it permits the verification of many of the data elements as they are entered at the terminals. The VISION software has facilities for setting up index or validation files for use in verifying subject category codes, language codes, geographic names, and other fields of the AGRICOLA record, which require input from a known set of values.

The disadvantage to the Four-Phase system is that, because of the increased complexity of the hardware and the software, it has not been as reliable as NAL would have liked.

Recently, NAL upgraded the Four-Phase system to handle remote terminals. Two terminals were installed at the Animal Parasitology Institute several miles away from the NAL building and connected to the Four-Phase computer by leased telephone lines. Institute staff members can enter bibliographic citations from their own field of research into the AGRICOLA database. By maintaining their own subfile, the Institute relieves the Indexing Section of the task of entering a significant number of citations into AGRICOLA. In return, NAL takes care of the processing and distribution of the subfile. Fortunately, the need for remote terminals was foreseen when the functional requirements were drawn up, and the vendor was required to demonstrate that capability for this system even though there was no need for them then.

Four-Phase has also installed a word-processing software package so that now NAL has a multi-purpose minicomputer system.

## Information Retrieval

NAL is developing an online cataloging and circulation control system which will allow NAL librarians to maintain an up-to-date inventory of the NAL collection. The principal advantage of an online catalog system is that updating the information on file is quicker and less labor-intensive than updating a card catalog; and is cheaper than republishing a book catalog. It takes a librarian working at a terminal only a few minutes to correct a record in the online catalog.

## Data Communications

The Communications and Data Services Division (CDSD) of Science and Education, USDA, operates both a PRIME 750 and a PRIME 550 on the ground floor of the NAL building. Although these two minicomputers do not belong to NAL, the NAL staff still has use of them, primarily to send and receive data to and from the Washington Computer Center, the departmental computer center. The PRIME computers run under the control of the PRIMOS operating system. These two minicomputers have software for many general purpose applications, such as language translators, text processing, data communications, and file management. The output from all batch programs submitted to WCC by the NAL staff is printed on the printers controlled by the PRIME computers.

The Prime computers are also used for entering bibliographic citations into the AGRICOLA database. The staff in the USDA Cooperative Extension Program at the University of Iowa wished to add citations on extension program publications to AGRICOLA. At first, they wrote the descriptive cataloging information on preprinted coding forms, and mailed the forms, along with copies of the publications, to NAL for keyboarding by the NAL staff.

Recently, the Cooperative Extension Program purchased an Apple II microcomputer and developed a program for entering and storing the descriptive cataloging data in the Apple. When the computer's disk file is filled up, the PRIME computer in the NAL building is dialed and the file is transmitted by telephone line to NAL. NAL catalogers then review the data and transmit it to WCC for inclusion in the AGRICOLA database.

## Microcomputers

NAL purchased its first microcomputer, an Alpha Micro, in 1978. It consisted of a CPU, two eight inch floppy disk drives, and two terminals. Later on, the system was upgraded by adding a 20 million byte disk subsystem. This microcomputer was to be used to access online databases, retrieve citations, and process them locally. Unfortunately, the software that was supplied with the microcomputer never lived up to expectations and NAL has had trouble finding any affordable software to use with the Alpha Micro.

This summer, Cuadra Associates, of Santa Monica, California, has installed the STAR Information Retrieval System on the Alpha Microcomputer owned by NAL. The software is now operational

and NAL personnel are undergoing training in the use of the new software system. With the STAR software, NAL will be able to build and maintain small to medium sized databases on the Alpha Microcomputer.

At about the same time that NAL purchased the Alpha Micro, several Lanier word-processing systems were acquired. Each Lanier is a stand-alone microcomputer with keyboard, CRT screen, and a printer attached. The system comes with several programs, each on a 5-1/4 inch floppy disk. In essence the Lanier is a general purpose microcomputer with specialized word-processing software. The Lanier is an example of "first-generation" office automation. It performs well at word-processing tasks, e.g., correspondence, mailing lists, preparation of camera-ready copy, etc. Even though the Laniers are no longer state-of-the-art technology, they are still heavily used, and there are no plans to replace them.

During 1982, NAL bought three IBM Personal Computers (PC), an Apple II, and a TRS80. All of these microcomputers come similarly equipped, but the IBM Personnel Computer will be described in detail. The principal hardware components are the keyboard, a video display unit, and a box housing several printed circuit boards. The primary hardware components are an Intel 8088 microprocessor and from 64K to 128K bytes of random-access memory (RAM). Each microcomputer comes equipped with two floppy disk drives, which are used to store both programs and data. Additional equipment consists of a printer and an acoustic coupler so that the computer may communicate with other computers. The principal software that comes with the IBM PC, or with any other personal computer, is a disk operating system (DOS) and a compiler for the BASIC programming language. Other software may be purchased as well, and for the IBM PC, NAL has purchased VISICALC (a spread sheet analysis program), a word-processing software package, a general ledger package, and an asynchronous communications control program. All of the personal computers are being used to develop and test software for information processing and delivery. One of the IBM PCs is also used for the NAL Operating Budget Development and Budget Tracking System.

Programs and data files that operate on one make of personal computer usually are not compatible with those of other manufacturers. For this reason, NAL has found it crucial to standardize on one model of personal computer for all applications which require a personal computer. We have decided on the IBM PC as the microcomputer that most closely meets NAL needs. Its principal advantages are an easy-to-use keyboard with both upper and lower case letters, ease of expandability, and the IBM reputation for service and maintenance. The disadvantage of the IBM PC is that there is little software suitable for library applications. For this reason, the PCs are used for administrative tasks, such as financial planning and forecasting, word processing, and database management. It is expected that library applications software will soon be available as there is a lot of activity in the personal computer software marketplace, much of it concentrated on the IBM PC.

## The Future - 1983 and Beyond

The future of data processing is in telecommunications. It is an almost universally available method for transmitting data between otherwise incompatible computers. Any computer, whether mini, micro, or mainframe, that can support asynchronous ASCII (a standard communication format) telecommunication can transmit or receive data from any other computer that supports asynchronous ASCII communication. Besides being widely available, this method uses inexpensive equipment that is almost always available.

Another trend that will affect how libraries use mini- and microcomputers is the development and proliferation of Very Large Scale Integration (VLSI) circuits. Microcomputers themselves are already a byproduct of VLSI technology. There are, however, new types of VLSI "chips" available that can be installed on a minicomputer to increase its capability by orders of magnitude with only a modest increase in cost. One example of this is the floating-point processor that can be attached to several of the more popular models of minicomputers. In addition, certain manufacturers are producing VLSI "chips" that perform text search and retrieval functions, and are incorporated into devices called "text search and retrieval systems" or "database machines." Such devices could have a profound effect on information storage and retrieval systems.

## Summary and Conclusion

Ten years of experience in using mini- and microcomputers has shown them to be cost-effective tools for storing, retrieving, and disseminating information. They have been most useful in data entry, and word processing, but, as new software is developed, their use has spread to other functional areas. They have become the major way to maintain productivity during times of rising personnel costs and declining personnel ceilings.

## Editor's Note

This article is a revision of a paper presented at the "International Conference on the Application of Mini and Microcomputers in Information, Documentation, and Libraries" which was held in Tel Aviv, Israel, March 13-18, 1983. The sponsors were: International Federation for Documentation (FID), Gesellschaft fuer Information und Dokumentation (GID), National Center for Scientific and Technological Information (COSTI), and Israel Society of Special Libraries and Information Centers (ISLIC). 

RARE VOLUME PRESENTED TO ARBORETUM LIBRARY

Joseph H. Howard, newly appointed Director of the National Agricultural Library, Roland M. Jefferson, Botanist, and Henry M. Cathey, Director of the U.S. National Arboretum have accepted a presentation copy of "Hyakka-fu," (Album of a Hundred Flowers) for the U.S. National Arboretum Branch Library. Jefferson was instrumental in obtaining the rare books while on a recent plant collecting trip to Japan.

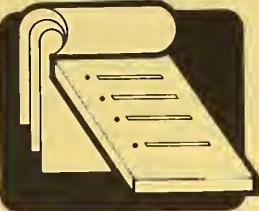


Left to right:  
Joseph H. Howard,  
Roland Jefferson,  
and Henry M.  
Cathey examine  
the two-volumes  
of the "Album  
of a Hundred Flowers."

The rare two volume set contains reproductions of over 900 paintings of more than 700 species of plants. The artist, Masao Ota who was born in Ito, Shizuoka Prefecture, in 1885, did the paintings in just under 3 years during World War II. A majority of the plants painted by Ota were collected from his garden, the Tokyo University Campus, Koishikawa Botanical Garden, from Karuizawa, and along the Ubara Coast area. A few were obtained in China while attending a medical meeting. Ota, in his youth, wanted to become an artist. Instead he went on to study medicine and became a well known physician. He later published numerous poems, essays, and wrote many other papers. He ended his life at 60 years when Japan was defeated in the war.

The volumes will be permanently housed at the U.S. National Arboretum.

-- Erik A. Neuman  
U.S. National Arboretum  
U.S. Department of Agriculture  
Washington, D.C.  
(202) 475-4857



## NEW SERIALS RECEIVED AT NAL

ACTA MYCOLOGICA SINICA. Beijing, K'o Hshueh Ch'ou Pan Sh'e. q. Vol. 1, no. 1 (Aug. 1982)-

QK600.C5

ADVANCES IN IRRIGATION. New York, Academic Press. a. Vol. 1 (1982)-

TC801.A34

ADVANCES IN PLANT PATHOLOGY. London, New York, Academic Press. irr. Vol. 1 (1982)-

SB731.A35

BEEF WEEK. Macon, GA, Livestock Breeder Journal. w (except one issue in July and Dec.). Vol. 1, no. 1 (Feb. 7, 1983)-

HD9433.U5B4

DEVELOPMENTS IN AGRICULTURAL ECONOMICS. Amsterdam, New York, Elsevier Scientific Pub. Co. irr. 1 (1983)-

HD1401.D4

FOREIGN AGRICULTURE CIRCULAR. DAIRY AND LIVESTOCK. Washington, D.C., U.S. Department of Agriculture, Foreign Agricultural Service. m. FDL-MT 1-82-

aHD9275.A1F665

FOREIGN AGRICULTURE CIRCULAR. HORTICULTURAL PRODUCTS. Washington, D.C., U.S. Department of Agriculture, Foreign Agricultural Service. m. FHORT 1-82 (July 1982)-

aSB319.4.F6

FOREIGN AGRICULTURE CIRCULAR. LIVESTOCK AND POULTRY. Washington, D.C., U.S. Department of Agriculture, Foreign Agricultural Service. s.a. FL & P 1-82 (Apr. 1981)-

aHD9410.1.F6

GEOPHYSICS & TECTONICS ABSTRACTS. Norwich, England, Geo Abstracts Ltd. bi-m. 1982/1- QC801.G4

JOURNAL OF TRACE AND MICROPROBE TECHNIQUES. New York, NY, Dekker. q. Vol. 1, no. 1. (1982)-

QD139.T7J6

MAJOR PROBLEMS IN VETERINARY MEDICINE. Philadelphia, Saunders. irr. Vol. 1 (1982)-

SF600.M3

SCHRIFTEN ZUM AGRIBUSINESS. INSTITUT FUR LANDWIRTSCHAFTLICHE BETRIEBS-UND ARBEITSLEHRE DER CHRISTIAN-ALBRECHTS-UNIVERSITAT ZU KIEL. Kiel, Kieler Wissenschaftsverlag Vauk. irr. Band 1 (1982)-

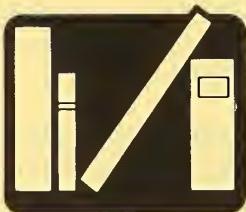
HD9000.5.S34

### NACAA PRESENTS PAPERS TO NAL



Back row: James A. Smith, Chair, Association Policy Committee; Alan Fusonie, Archivist, NAL. Front Row: A. Daniel Merrick, President, NACAA; Joseph H. Howard, Director, NAL.

Representatives of the National Association of County Agricultural Agents (NACAA) signed a memorandum of understanding August 11, 1983, setting up a depository archives of the Association in the National Agricultural Library (NAL). The NACAA, with a membership of 6,500, was organized in 1915. It is the catalyst that promotes leadership, inspiration, and dedication for the county agents of the United States.



## NEW BIBLIOGRAPHIES

AGING RESEARCH: A COMPILATION OF REFERENCES AND ABSTRACTS FOR AN ISSUE OF GROWING CONCERN. Marianne Goodfellow, et al. University Park, PA. Pennsylvania State University, Cooperative Extension Service, 1982. 40 leaves in various foliations (Extension Studies 91). (NAL Call No.: S544.3.P4P4 no. 91).

ANNOTATED BIBLIOGRAPHY OF INTRODUCTORY ARTICLES TO AID IN THE SELECTION OF SMALL COMPUTER SYSTEMS. Lynne Rosenthal, John Barkley. Washington, D.C., U.S. Department of Commerce, National Bureau of Standards, Institute for Computer Science and Technology, Center for Programming Science and Technology, 1982. 14 p. (NBSIR; United States. National Bureau of Standards 81-2573.) (NAL Call No.: Z5643.M54R6).

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BIBLIOGRAPHY OF COLORADO VEGETATION DESCRIPTION. W. L. Baker. Provo, Brigham Young University. The Great Basin Naturalist. v. 43 (1): 45-64. Jan. 31, 1983. (NAL Call No.: 410 G79).

BIOMASS CONVERSION FROM AGRICULTURAL SOURCES (1976-AUG. 82). CITATIONS FROM THE ENERGY DATA BASE. Springfield, VA, National Technical Information Service, 1982. 171 leaves in various foliations. (NAL Call No.: Z7914.G2B54).

CAPILLARY CHROMATOGRAPHY OF FOODS (JUL. 73-OCT. 82): (CITATIONS FROM THE FOOD SCIENCE AND TECHNOLOGY ABSTRACTS DATA BASE). Springfield, VA, National Technical Information Service, 1982. 103 leaves in various foliations. (NAL Call No.: Z5776.C4C37).

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ENDANGERED SPECIES: CONCEPTS, PRINCIPLES, AND PROGRAMS: A BIBLIOGRAPHY. Don Wood. Tallahassee, Florida Game and Fresh Water Fish Commission, 1981. (NAL Call No.: Z7994.W5W66).

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EVALUATION OF NUTRITION INTERVENTIONS: AN ANNOTATED BIBLIOGRAPHY AND REVIEW OF METHODOLOGIES AND RESULTS. Ann Burgess. 2nd ed., Rome, Foreign Agriculture Organization, 1982. 194 p. (FAO Food and Nutrition Paper 24.) (NAL Call No.: TX341.F605 no. 24).

GAS CHROMATOGRAPHY (INCLUDES CARBOHYDRATES, FLAVONOIDS, LIPIDS, ESSENTIAL OILS, NITROSO COMPOUNDS, PESTICIDES, AGROCHEMICALS, POLLUTANTS). Amsterdam, Elsevier Scientific, Journal of Chromatography. v. 258: B63-B80, Mar. 18, 1983. (NAL Call No.: 475 J824).

ELECTROPHORESIS (INCLUDES CARBOHYDRATES, ORGANICS ACIDS AND LIPIDS, PROTEINS, AMINO ACIDS). Amsterdam, Elsevier Scientific. Journal of Chromatography. v. 258: B101-B114, Mar. 18, 1983. (NAL Call No.: 475 J824).

FOOD INDUSTRY: SUNFLOWER OIL (JUL 76-SEP 82): (CITATIONS FROM THE FOOD SCIENCE AND TECHNOLOGY ABSTRACTS DATA BASE). Springfield, VA, National Technical Information Service, 1982. 217 leaves in various foliations. (NAL Call No.: Z5074.S9F6).

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HAEMONCHUS OF RUMINANTS: A BIBLIOGRAPHY OF TITLES. M. L. Sood and Jyotika Kapur. 1st ed. Ludhiana, Shikha Publications, 1982. 431 p. (NAL Call No.: SF810.H4S6 1982).

LIQUID COLUMN CHROMATOGRAPHY (INCLUDES FLAVONOIDS, AFLATOXINS, MYCOTOXINS, POLYSACCHARIDES, LIPIDS GLYCOSIDES, ALKALOIDS VITAMINS, PESTICIDES POLLUTANTS). Amsterdam, Elsevier Scientific. Journal of Chromatography. v. 258: B1-B80, Mar. 18, 1983. (NAL Call No.: 475 J824).

MEAT FLAVOR: PORK AND PORK PRODUCTS (1972-JAN 83): (CITATIONS FROM THE FOOD SCIENCE AND TECHNOLOGY ABSTRACTS DATA BASE). Springfield, VA, National Technical Information Service, 1983. 194 leaves in various foliations. (NAL Call No.: Z5776.C4M43).

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NMR: APPLICATIONS (SIC) in MEDICAL DIAGNOSIS (1977-AUG. 82) (CITATIONS FROM THE INSPEC DATA BASE). Springfield, VA, National Technical Information Service, 1982. 61 leaves in various foliations. (NAL Call No.: Z6675.A8N6).

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SALT TOLERANCE OF CROPS AND PLANT METABOLISM IN SALINE SUBSTRATE: AN ANNOTATED BIBLIOGRAPHY 1940-1980. G. L. Malwal. Dehradun, India, International Book Distributors, 1982, 197 p. (NAL Call No.: Z5354.S35M36).

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SUPPLEMENT TO URBAN FORESTRY: A BIBLIOGRAPHY. Jean Albrecht and Patrick J. Weicherding. St. Paul, MN, Agricultural Experiment Station, University of Minnesota, 1982. 62 p. (Miscellaneous Publication 16.) (NAL Call No.: S1.M52 no. 16). 

## CORRECTION

LAND RECLAMATION: PHYSICAL RESTORATION OF SOIL AFTER MINING: A SELECTIVE BIBLIOGRAPHY (New Zealand Soil Bureau Bibliographic Report 29) was listed incorrectly in ALIN, Vol. 9, no. 5, May 1983 as free. The price is NZ \$7.50.

## BIBLIOGRAPHIC CLEARANCES

As prescribed in 2AR82, USDA agencies, including field installations, must obtain authorization from the National Agricultural Library before beginning compilation of a bibliography. The following proposal for bibliography was cleared in July:

EFFECTS OF COMPETING VEGETATION ON FORESTRY TREES: A BIBLIOGRAPHY WITH ABSTRACTS. Ronald E. Stewart, Larry L. Gross, and Barbara Honkala, compilers. For further information contact Larry L. Gross, Forest Pest Management, FS/USDA, Room 1205, Rosslyn Plaza-Building E, Rosslyn, VA 22209. 

## QUICK BIBLIOGRAPHIES

The bibliographies in this series are primarily computerized online or batch bibliographies emanating from searches performed by the NAL Reference Staff in response to customer requests. Searches are selected for inclusion based on the currency of the topic, interest among clientele, relative length, and probable value to a larger audience. Revisions or updates will be renumbered and reannounced. Only one copy of a title will be sent; however, requestors may make copies. To request a copy of a Quick Bibliography send the title, series number, and a return addressed label to:

Reference Section, Room 111  
National Agricultural Library  
Beltsville, MD 20705 

NAL--Q.B.--83-34. APPROPRIATE TECHNOLOGY FOR RURAL DEVELOPMENT; 1970-1983. 179 citations from AGRICOLA. Searched by Maria Pisa. June 1983.

NAL--Q.B.--83-35. NITROGEN FIXATION IN SOYBEANS, 1979-1983. 188 citations from AGRICOLA. Searched by Jayne MacLean. June 1983.

NAL--Q.B.--83-36. SPICES: PRODUCTION, ANALYSIS, UTILIZATION, 1979-1983. 275 citations from AGRICOLA. Searched by Jayne MacLean. June 1983.

NAL--Q.B.--83-37. PRESCRIBED BURNING: THE CONTROLLED USE AND EFFECTS OF FIRE, 1979-1983. 171 citations from AGRICOLA. Searched by Maria Pisa. July 1983.

NAL--Q.B.--83-38. CALMODULIN, 1979-1983. 39 citations from AGRICOLA. Searched by W. H. Longenecker. July 1983.

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NAL--Q.B.--83-40. ORGANIC FARMING AND GARDENING. A Revision. 1970-1983. Searched by Jayne T. MacLean. August 1983.

NAL--Q.B.--83-41. REGENERATION OF SOUTHERN PINES, 1970-1983. 171 citations from AGRICOLA. Searched by Jayne T. MacLean. August 1983.

NAL--Q.B.--83-42. SMALL FARMS, FAMILY AND PART-TIME FARMING IN THE UNITED STATES, APRIL 1980-AUGUST 1983. 212 citations from AGRICOLA. Searched by Jayne T. MacLean. Updates Q.B. 80-11. August 1983.

NAL--Q.B.--83-43. HERBICIDES: ECOLOGICAL EFFECTS, 1970-1971. 181 citations from AGRICOLA. Searched by Jayne T. MacLean. August 1983. 

## BIBLIOGRAPHIES AND LITERATURE OF AGRICULTURE

The U.S. Department of Agriculture established a departmental series for bibliographies at the request of the National Agricultural Library in 1978. The projected subject of a bibliography to be published in this series is cleared by a publications officer in the Library prior to compilation. Copies of bibliographies in this series are available for consultation at the Library (call no.: Z5076.A1.U54).

In the January/February 1983 issue (Vol. 9, no. 1/2) we listed the Publications Center of the Office of Governmental and Public Affairs as a source for these bibliographies. The Center has been abolished. New sources are as follows:

BLA-1, 2, 3, 4, 5, 16 may be requested from Educational Resources, National Agricultural Library, Room 1402, Beltsville, MD 20705. Telephone (301) 344-3937.

BLA-6, 21, 25, 26 may be purchased from National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22151. See citations below for price information.

BLA-7, 14, 19, 22 may be requested from Publications Office, Economic Management Service, U.S. Department of Agriculture, Room 0054, S-Bldg., Washington, D.C. 20250. Telephone: (202) 447-7487.

BLA-8, 9, 11, 12, 17, 18, 20 may be requested from Publications Office, Agricultural Research Service, U.S. Department of Agriculture, Room 6007, S-Bldg., Washington, D.C. 20250. Telephone: (202) 447-4111.

BLA-10, 15, 23 may be requested from Information, Forest Service, U.S. Department of Agriculture, Room 3244, S-Bldg., Washington, D.C. 20250. Telephone: (202) 447-3957.

BLA-13, 24 may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20401. See citations for price information.

All bibliographies are free unless otherwise indicated. Please enclose a self-addressed mailing label to expedite shipment.

BLA-1: BIBLIOGRAPHY OF AGRICULTURAL BIBLIOGRAPHIES, 1977. Charles N. Bebee. Beltsville, MD, National Agricultural Library, 1978. 343 p.

BLA-2: AQUACULTURE AND HYDROPONICS: 1968-1978. Charles N. Bebee. Beltsville, MD, National Agricultural Library, 1979. 71 p.

BLA-3: AGRICULTURE OF THE AMERICAN INDIAN: A SELECT BIBLIOGRAPHY. Cecil Harvey. Beltsville, MD, Economics, Statistics, and Cooperatives Service, 1979. 64 p.

BLA-4: SORGHUMS AND MILLETS BIBLIOGRAPHY, APRIL 1976-AUGUST 1978. Charles N. Bebee. Science & Education Administration, 1979. 186 p.

BLA-5: ENERGY FOR AGRICULTURE - A COMPUTERIZED INFORMATION RETRIEVAL SYSTEM. Technical Information Systems, 1979. 408 p. 2613 citations.

BLA-6: BIBLIOGRAPHY OF ECONOMIC REGULATION OF AGRICULTURAL AND NONAGRICULTURAL INDUSTRIES, 1960-79. Winston W. Grant and Dale C. Dahl. Economics, Statistics, and Cooperative Services, 1980. 50 p. 40 citations. \$10.00 paper; \$4.50 microfiche (PB 80-145063).

BLA-7: WOOD AND ENERGY IN NEW ENGLAND; A REVIEW AND BIBLIOGRAPHY. Lynn Palmer, Robert McKusick, and Mark Bailey. Natural Resources Division; Economics, Statistics, and Cooperative Services, 1980. 71 p. 180 citations.

BLA-8: RECLAMATION AND REVEGETATION OF LAND AREA DISTURBED BY MAN; AN ANNOTATED BIBLIOGRAPHY OF AGRICULTURAL RESEARCH, 1972-80. R. F. Follett. Science and Education Administration, Agricultural Research, 1980. 55 p.

BLA-9: REVIEW AND EVALUATION OF URBAN FLOOD FLOW FREQUENCY PROCEDURES. Walter J. Rawls, Virginia Strickler, and Ken Wilson. Science and Education Administration, 1980. 62 p. 128 citations.

BLA-10: ROOTING HABITS OF SELECTED COMMERCIAL TREE SPECIES OF THE EASTERN UNITED STATES, A BIBLIOGRAPHY. Penninah Smith and Leanne Every. Forest Service, 1980. 59 p. 1360 citations.

BLA-11: BIBLIOGRAPHY FOR SMALL AND ORGANIC FARMERS, 1920-78. J. W. Schwartz. Science and Education Administration, 1981. 237 p. 1176 citations.

BLA-12: GRAIN DUST ABSTRACTS. Fang S. Lai. Science and Education Administration, 1981. 28 p. 61 citations.

BLA-13: BIBLIOGRAPHY AND KEYWORD INDEX OF THE BITING MIDGE (DIPTERA: CERATOPOGONIDAE). William R. Atchley, Willis W. Worth, Charles T. Gaskins, and Sandra L. Strauss. Science and Education Administration, 1981. 544 p. \$8.50. (Stock No. 001-000-042040-8)

BLA-14: ECONOMICS OF AGRICULTURAL PEST CONTROL: AN ANNOTATED BIBLIOGRAPHY, 1960-79. Craig D. Ostenn, Edward B. Bradley, and L. Joe Moffit. Natural Resources and Economics; Economics and Statistics Service, 1981. 53 p. 123 citations.

BLA-15: A SELECTIVE BIBLIOGRAPHY ON INSECTS CAUSING WOOD DEFECTS IN LIVING EASTERN HARDWOOD TREES. C. John Hayward and J. D. Solomon. Forest Service, 1981. 34 p. 822 citations.

BLA-16: STRUCTURE OF U.S. AGRICULTURE BIBLIOGRAPHY. Ronald C. Wimberly and Charles N. Bebee. Science and Education Administration, 1981. 514 p.

BLA-17: BIBLIOGRAPHY OF PSYLLA (HOMOPTERA: PSYLLIDAE) ON PEAR TREES. G. J. Fields, R. W. Zwick, and H. R. Moffitt. Science and Education Administration, 1981. 12 p.

BLA-18: STORAGE OF HIGH-MOISTURE GRAIN TREATED WITH CHEMICALS; A BIBLIOGRAPHY. Agricultural Research Service, 1982. 17 p. 1118 citations.

BLA-19: INPUTS USED IN U.S. FARM PRODUCTION, A BIBLIOGRAPHY OF SELECTED ECONOMIC STUDIES, 1950-80. Thomas Spinks and Dale C. Dahl. Economics and Statistics Service, 1981. 162 p.

BLA-20: ENGLISH AND FOREIGN PUBLICATIONS ON HOPS. C. E. Zimmerman. Science and Education Administration, 1981. 89 p. 543 citations.

BLA-21: A SURVEY OF RECENT U.S. DEVELOPMENTS IN INTERNATIONAL AGRICULTURAL TRADE MODELS. Robert L. Thompson. Economic Research Service, 1981. 74 p. 276 citations. \$11.50 paper; \$4.50 microfiche. (PB 82-102609)

BLA-22: GREAT PLAINS IRRIGATION, 1975-80; A LITERATURE REVIEW. Curtis A. Everson and Rodney L. Sharpe. Economic Research Service, 1981. 69 p. 467 citations.

BLA-23: RELATIONSHIPS OF BIRDS AND SPRUCE BUDWORMS - LITERATURE REVIEW AND ANNOTATED BIBLIOGRAPHY. Hewlette S. Crawford, Jr., and Daniel T. Jennings. Forest Service, 1982. 38 p.

BLA-24: NUTRITION EDUCATION RESOURCE GUIDE: AN ANNOTATED BIBLIOGRAPHY OF EDUCATIONAL MATERIALS FOR THE WIC AND CSF PROGRAMS. E. C. McLaughlin, J. Randell, M. Mower, and J. J. Kiefer. Food and Nutrition Information Center, Human Nutrition Information Service, U.S. Department of Agriculture, 1982. 148 p. 346 citations. \$6.00.

BLA-25: DIRECTORY OF AQUACULTURE INFORMATION RESOURCES. National Agricultural Library, 1982. 53 p. \$10.00 paper; \$4.50 microfiche.

BLA-26: MAJOR AQUACULTURE ASSOCIATIONS, EDUCATION AND RESEARCH RESOURCES IN THE UNITED STATES. National Agricultural Library, 1983. 174 p. \$17.50 paper; \$4.50 microfiche. ☒

## FOOD & FITNESS FAIR

On August 4, 5, and 6 the National Agricultural Library participated in the Food & Fitness Fair, sponsored by the U.S. Department of Agriculture in cooperation with the President's Council on Physical Fitness and with private industry. NAL was one of 42 exhibitors who braved the sweltering heat on the Mall in front of the USDA's Administration Building, for the Food & Fitness Campaign to "eat better and keep fit."



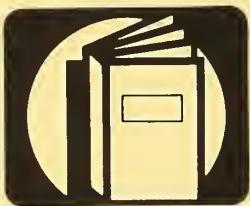
Staffing the NAL exhibit tent, from left to right, Marilyn Jacobs, Educational Resources Staff; Elaine MacLaughlin, Reference Staff; and David Hoyt, Educational Resources Staff. Not shown, Victor Lambert, a summer assistant working for the Maintenance Section. (Photo Courtesy of USDA)

The purpose of the Mall exhibit was to dramatize and publicize the Department of Agriculture's dual commitment to both good food, including diet and nutrition, and physical fitness. Keeping fit physically involves both eating well, which Americans do; and eating right, which we don't always do so well.

Thousands (literally) saw a demonstration of the mobility of NAL's AGRICOLA database and its ease of remote access. On display was literature from the Food & Nutrition Information Center (FNIC) and NAL collections on topics of food, diet, physical fitness, farm animals, weight control and nutrition, cooking, and food preservation. Handouts to visitors included a 100 citation bibliography on physical fitness, NAL's Guide to Services, and very popular plastic book bags with NAL's name and address on them.

In addition to all of the "under the tent" exhibitors, highlights of the event included rhythmic gymnastics and fitness activities for children presented by the President's Council on Physical Fitness and Sports; a celebrity run; a celebrity softball game between a local radio station (WMAL) and USDA's All Star Team; health screening tests provided by the National Health Screening Council and the Lions Club; and most popular with the children, a petting barnyard sponsored by the Maryland Chapter of Future Farmers of America.

For more information about the fair contact Educational Resources Staff, USDA, National Agricultural Library, Beltsville, MD 20705.



## NEW PUBLICATIONS OF NOTE

A CATALOG OF THE COLEOPTERA OF AMERICA NORTH OF MEXICO; FAMILY: LANGURIIDAE. J. F. Lawrence and P. Vaurie, Canberra, Australia, Division of Entomology, Prepared by Agricultural Research Service, U.S. Department of Agriculture. CSIRO, 1983. 13 p. (Agriculture Handbook 529-92). Price unavailable. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (202) 783-3238

DINING OUT: SEPARATE EATING PLACES KEEP CUSTOMERS HAPPY, SUPPLIERS BUSY. Michael G. Van Dress. Washington, D.C., National Economics Division, Economic Research Service, U.S. Department of Agriculture, 1983. 91 p. (Agricultural Information Bulletin no. 459). Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. For price, call GPO's order desk (202) 783-3238. Microfiche copies (\$4.50 each) can be purchased from National Technical Information Service, Identification Section, 5285 Port Royal Road, Springfield, VA 22161. (202) 783-3238

1982-83 DIRECTORY OF PROFESSIONAL WORKERS IN STATE AGRICULTURAL EXPERIMENT STATIONS AND OTHER COOPERATING STATE INSTITUTIONS. Washington, D.C., Science and Education, U.S. Department of Agriculture, 1983. 234 p. (Agricultural Handbook No. 305). \$6.00. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

ECOLOGY AND REGENERATION OF LODGEPOLE PINE. James E. Lotan and David A. Perry. Missoula, MT, Intermountain Forest and Range Experiment Station, Forest Service, U.S. Department of

Agriculture, 1983. 51 p. (Agriculture Handbook 606). Price unavailable. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (202) 783-3238

FOREST MANAGEMENT CHEMICALS; A GUIDE TO USE WHEN CONSIDERING PESTICIDES FOR FOREST MANAGEMENT. Denis R. Hamel. Washington, D.C., Forest Service, U.S. Department of Agriculture, 1983. 645 p. (Agricultural Handbook 585), \$10.00. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (202) 783-3238

JAPAN SCIENCE AND TECHNOLOGY OUTLOOK. Tokyo, Fuji Corporation, 1983. 300 p. \$65.00 (inclusive of sea mail postage). Order from publishers: Fuji Corporation, Busicen Bldg., 5-29-7, Jingumae, Shibuya-ku, Tokyo 150, Japan.

MAKING FOOD DOLLARS COUNT; NUTRITIOUS MEALS AT LOW COST. Washington, D.C., Human Nutrition Information Service, U.S. Department of Agriculture, 1983. 26 p. (Home and Garden Bulletin 240). Price unavailable. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (202) 783-3238

NUTRIENT CONSUMPTION PATTERNS OF LOW-INCOME HOUSEHOLDS. Joyce E. Allen/Kenneth E. Gadson. Washington, D.C., Economic Research Service, U.S. Department of Agriculture, 1983. 46 p. (Technical Bulletin No. 1685). Paper \$10.00; Microfiche \$4.50. Order from National Technical Information Service, Identification Section, 5285 Port Royal Road, Springfield, VA 22161.

PRELIMINARY DIRECTORY OF LIVING PLANT COLLECTIONS OF NORTH AMERICA. Swarthmore, PA, American Association of Botanical Gardens and Arboreta, 1983. \$15.00 per copy plus postage and handling per copy. Order from AABGA, P. O. Box 206, Swarthmore, PA 19081.

SALINE-SEEP DIAGNOSIS, CONTROL, AND RECLAMATION. Washington, D.C., Agricultural Research Service, U.S. Department of Agriculture, 1983. 22 p. (Conservation Research Report No. 30). \$3.00. Order from Superintendent of

Documents, U.S. Government Printing Office, Washington, D.C. 20402.  
(202) 783-3238

SHEEP PRODUCTION. W. Haresign. Nottingham, Eng., University of Nottingham, School of Agriculture, 1983. 576 p. \$115.00. Order from Butterworth Publishers, 10 Tower Office Park, Woburn, MA 01801.

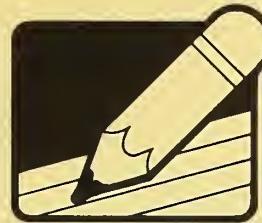
#### TECHNICAL INFORMATION FROM THE FOOD SAFETY AND INSPECTION SERVICE.

Washington, D.C., The Service, U.S. Department of Agriculture, 1983. 8 p. Free. Lists all the technical information--publications and audio-visual material--currently available from the Food Safety and Inspection Service. Copies of this listing may be ordered from USDA-FSIS, Publications Office, Rm. 1163-S, Washington, D.C. 20250.

TRACE ELEMENTS IN HEALTH. J. Rose. London, Institution of Environmental Sciences, 1983. 317 p. \$69.95. Order from Butterworth Publishers, 10 Tower Office Park, Woburn, MA 01801.

THE U.S. POULTRY INDUSTRY; CHANGING ECONOMICS AND STRUCTURE. Floyd A. Lasley, Washington, D.C., National Economics Division, Economic Research Service, U.S. Department of Agriculture, 1983. 27 p. (Agricultural Economic Report 502). Price unavailable. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. (202) 783-3238. Microfiche \$4.50, available from National Technical Information Service, Identification Section, 5285 Port Royal Road, Springfield, VA 22161.

U.S. TIMBER PRODUCTION, TRADE CONSUMPTION, AND PRICE STATISTICS 1950-81. Alice H. Ulrich. Washington, D.C., Demand, Price, and Trade Analysis Group, Forest Resources Economics Research Staff, Forest Service, U.S. Department of Agriculture, 1983. 81 p. (Miscellaneous Publication 1424). Price unavailable. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (202) 783-3238 



## NAL PROJECTS AND POLICIES

### 1890 LAND-GRANT LIBRARY SEMINAR

NAL has combined funds with Higher Education, Agricultural Research Service (ARS), to be used to assist the 1890 libraries in staging a seminar/symposium in the late fall to promote agricultural information and its support among 1890 administrators, instructors, and extension agents. Dr. Naughton, ARS, is serving on the 1890 librarians' planning committee as NAL's representative.

-- Wallace C. Olsen, Chief Field & Special Programs Div.  
NAL (301) 344-3834

### STAR SYSTEM

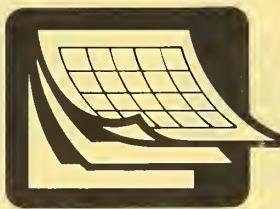
Cuadra Associates, Santa Monica, California, have installed the STAR Information Retrieval System on the Alpha-Microcomputer owned by NAL. The software is now operational and NAL personnel will undergo training in the use of the new software system. With the STAR software, NAL will be able to build and maintain small to medium-sized databases with the Alpha-Microcomputer.

-- Philip A. Turner, Acting Chief Information Systems Div., NAL  
(301) 344-3813

### COMPUTER AIDED INSTRUCTION

NAL is developing a pilot training program using Computer Aided Instruction software "AUTHOR" and an associated Laser Videodisc Computer.

-- Leila Moran, Leader, Special Services & Products, Educational Resources, NAL (301) 344-3937 



## AGRICULTURE DATEBOOK

October 2-6: PRODUCTIVITY IN THE INFORMATION AGE. Annual meeting of the American Society for Information Science. Crystal City, Arlington, VA. Contact: Edmond Sawyer, Conference Chairman, ASIS Headquarters, 1010 16th St. N.W., Washington, D.C. 20036. (202) 659-3644.

October 9-11: FAMILIES AND ENERGY; COPING WITH UNCERTAINTY. East Lansing, MI. Contact Families and Energy Conference, Lifelong Education Programs, Kellogg Center for Continuing Education, Michigan State University, East Lansing, MI 48824.

October 16-19: FOOD MARKETING INSTITUTE FALL CONFERENCE. Washington-Hilton, Washington, D.C. Contact: Michael Muldoon, Pres., 1750 K Street, STE 700, Washington, D.C. 20006.

October 19-23: AMERICAN HORTICULTURAL SOCIETY ANNUAL MEETING. Washington, D.C. Contact: Thomas W. Richardson, Exec. Dir., 7931 Boulevard Drive, Mount Vernon, VA 22121.

October 31-November 2: ANIMALS IN THE FARMING SYSTEM. Farming Systems Research Symposium. Title XII Strengthening Grant. K-State Union. Contact: Office of International Agricultural Programs, Kansas State University, Manhattan, KS 66506.

October 31-November 4: INTERNATIONAL WORKSHOP ON LAND EVALUATION FOR EXTENSIVE GRAZING. ILCA Headquarters, Addis Ababa, Ethiopia. Contact: Dr. W. Siderius (Workshop Secretary), International Institute for Aerial Survey and Earth Sciences (ITS), 350 Boulevard 1945, P. O. Box 6, 7500 AA Enschede, The Netherlands.

November 28-December 3: ENTOMOLOGICAL SOCIETY OF AMERICA. Renaissance Center, Detroit, MI. Contact: W. Darryl Hansen, Exec. Dir., 4603 Calvert Road, College Park, MD 20740.

December 4-7: AMERICAN SOCIETY FARM MANAGERS RURAL APPRAISERS. San Diego, CA; Convention Performing Arts Center. Contact: Carl O. Norberg, Exec. V.P., Box 6857, 360 S. Monroe, STE 460, Denver, CO 80206.

December 6-8: INTERNATIONAL ONLINE INFORMATION MEETING. Cunard International Hotel, Hammersmith, London. Contact: Organizing Secretary, Online Information Meeting, Learned Information, Besselsleigh Road, Abingdon, Oxford, OX136LG, England. Tel: 0865-730275. Telex: 837704 INFORM G.

February 8-10, 1984: WEED SCIENCE SOCIETY. Miami, FL, Hyatt Regency. Contact: Claude J. Cruse, Exec. Sec., 309 West Clark St., Champaign, IL 61820.

May 6-11, 1984: 7TH INTER-AMERICAN MEETING OF AGRICULTURAL LIBRARIANS AND DOCUMENTALISTS-RIBDA. Brasilia, DF, Brasil. Contact: Ana Flavia Pereira Medeiros da Fonseca, Coordenadora de Operacoes e Servicos, CENAGRI, Caixa Postal: 10.2432, 70043 Brasilia, DF, Brasil or Ana Maria Paz de Erickson, Secretaria Ejecutiva, AIBDA, c/o CATIE 7170, Turrialba, Costa Rica.

May 24-26, 1984: SYMPOSIUM ON THE HISTORY OF SOIL AND WATER CONSERVATION. Columbia, MO. Contact: Douglas Helms, Historian, SCS-USDA, P. O. Box 2980, Washington, D.C. 20013.

September 17-21, 1984: THIRTEENTH WORLD CONGRESS ON DISEASES OF CATTLE. Durban, Republic of South Africa. Contact: Prof. R. I. Coubrrough, Chairman, Scientific Programme Committee, P. O. Box 25333, Northcliff 2115, Republic of South Africa.

**AGRICULTURAL LIBRARIES INFORMATION NOTES** provides a channel of communication to technical information specialists, librarians, extension workers, researchers, and scientists on agricultural information activities. It is published monthly by the U.S. Department of Agriculture, National Agricultural Library, Beltsville, MD 20705. Leila Moran, Editor. (Tel: 301-344-3937)